

REMARKS

By this amendment, Applicant has amended the specification by including a substitute specification in which the paragraph numbers have been deleted and references to “the patent documents” have been revised as suggested by the Examiner in numbered sections 4 and 5 of the Office Action.

Since numbering the paragraphs of the specification of record is not considered a change that must be shown under 37 CFR 1.125(c) (Manual of Patenting Procedure) (MPEP) 608.01(q)), Applicant has not shown the deletion of the paragraph numbering in the attached marked-up copy of the substitute specification. The specification has also been amended to change “1,3-dinitropyrene, 1,6-dinitropyrene and 1,8-dinitropyrene” to read --1,3-dinitropyrene, 1,6-dinitropyrene and 1,8-dinitropyrene--. The substitute specification contains no new matter.

Applicant has also amended the claims to more clearly define the invention. In particular, claims 1 and 2 have been amended to recite that the separation column is for separating a sample comprising nitropolycyclic aromatic hydrocarbons into at least four separate nitropolycyclic aromatic hydrocarbons including 1-nitropyrene, 1,3-dinitropyrene, 1,6-dinitropyrene and 1,8-dinitropyrene. See, e.g., the paragraph bridging pages 7 and 8 of the original specification and the first full paragraph on page 9 of the original specification. All of the apparatus claims have also been to change “hydrocarbon” to --hydrocarbons--. Non-elected claims 5-8, 13 and 14 have been canceled without prejudice or disclaimer.

In view of the foregoing amendments to the specification, reconsideration and withdrawal of the objection to the disclosure in numbered sections 4-6 of the Office Action are requested.

Claim 1 stands rejected under 35 U.S.C. 102(b) as allegedly being anticipated by the Li et al. article. Claims 3, 4 and 9 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. Applicant traverses these rejections and requests reconsideration thereof.

The rejected claims relate to an apparatus for analyzing nitropolycyclic aromatic hydrocarbons. The apparatus includes a separation column for separating a sample comprising nitropolycyclic aromatic hydrocarbons into at least four separate components including 1-nitropyrene, 1,3-dinitropyrene, 1,6-dinitropyrene and 1,8-dinitropyrene; a reduction column for aminating the separated nitropolycyclic aromatic hydrocarbons; and a fluoresce detector. The apparatus can also include an analysis column for separating an interfering component contained in the sample from the aminated separated nitropolycyclic aromatic hydrocarbons (see, claim 2).

The Li et al. articles disclose that the determination of mono- and di-nitro polycyclic aromatic hydrocarbons (PAHs) was accomplished by on-line reduction to the corresponding amino PAHs, which were then separated and detected using high-performance liquid chromatography (HPLC) and chemiluminescence detection. On page 179 of this article, chromatograms are shown in which 2(A) is a chromatogram of a standard mixture. Peaks: 1 = 1,8- dinitropyrene, 2 = 2-nitroanthracene, 3 = 1-nitropyrene, 4 = 6-nitrocrysene, 5 = 3-nitroperylene and 6 = 1-nitroperylene, (B) and (C) are

chromatograms of a diesel particulate extract from fractions containing mono-nitro PAHs and di-nitro PAHs, respectively, and (D) and (E) are chromatograms of a diesel exhaust emission filter extract sample from fractions containing mono-nitro PAHs and di-nitro PAHs, respectively.

While the introduction of Li et al. mentions that “great attention has been directed to 1-nitropyrene and 1, 3-, 1, 6- and 1,8-dinitropyrenes,” it does not appear that the Li et al. article discloses a separation column for separating a sample comprising nitropolycyclic aromatic hydrocarbons into at least four separate components including 1-nitropyrene, 1,3-dinitropyrene, 1,6-dinitropyrene and 1,8-dinitropyrene. Accordingly, the Li et al. article does not disclose and would not have rendered obvious the presently claimed invention.

In view of the foregoing amendments and remarks, favorable reconsideration and allowance of all the claims now in the application are requested.

Please charge any shortage in the fees due in connection with the filing of this paper, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (Case: 648.45478X00), and please credit any excess fees to such deposit account.

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP

/Alan E. Schiavelli/

Alan E. Schiavelli

Registration No. 32,087

AES/at
(703) 312-6600